

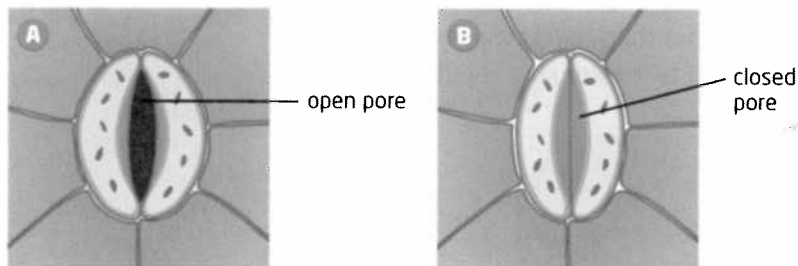
Section 2.2 Review

Section Summary

- Plants have two organ systems for sustaining life: the root system and the shoot system.
- The root system takes in water and nutrients from the soil and moves these substances to the stem.
- The shoot system supports the plant, performs photosynthesis, and transports water, nutrients, and sugars.
- Transpiration pulls water from the roots to the leaves through the xylem tissue. This pull is aided by two properties of water—cohesion and adhesion.
- Nutrients in the form of dissolved sucrose move through the plant in the phloem tissue. The sucrose is stored as starch if it is not needed immediately.

Review Questions

- K/U** 1. Compare and contrast the functions of the xylem and the phloem.
- T/I** 2. In which of the diagrams below will the leaves exert a stronger pull on water from the roots? Explain your answer.



- T/I** 3. How could you demonstrate that it is a structure on the bottom side of leaves that regulates the amount of transpiration that occurs in a plant?
- A** 4. Will a tulip transpire more in a humid environment or in a dry environment? Explain your reasoning.
- A** 5. If the stem of a plant is bent or snapped, the part of the plant above the bend will usually die, even if propped up with a support. Explain why.
- K/U** 6. Why is maple sap collected in the spring instead of in the fall?
- C** 7. Use the information in **Figure 2.25** to create a flowchart showing how food is transported through a tree.
- A** 8. Would the rate of maple sap retrieved from a tree be greater during the day or during the night? Why?